

NASA Historical Note No. 22

THE IMPACT OF SPUTNIK I

Case-Study of American Public Opinion

At the Break of the Space Age

October 4, 1957

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. . . FOREWORD

Only 23 inches in diameter, 18¹/₂ pounds in weight, Sputnik I was launched on October 4, 1957. The force that projected the Soviet satellite into an orbit around the earth 588 miles at apogee was unknown and undisclosed. This suggested serious military and scientific implications to the astonished mind of the United States, bested in technology and beaten in time by its most dangerous foes, the U.S.S.R. and dictatorship, with its enforceable concentration of effort. Secondly, Sputnik I marked the advent of The Space Age, a concept and an era whose meaning still lies undefined in the imagination, but which, nevertheless, from the launch date of that first satellite, was on the brink of reality.

The following compilation partially records, as time and material permitted, the immediate reactions--anxiety, hope, ambition--of the American people, as first published in the following days of October and November, and statistically chronicled in later months. The general, working definition of "public opinion" utilized in this paper includes: comments of select, informed, and influential segments of American opinion, such as scientists, educators, and military leaders; American magazine and newspaper opinion, columnist and editorial, as representative to the knowledgeable and vocal segment of the public; statements of Congressional leaders, as spokesmen for the larger, constituent reaction; statements made by various members of the Eisenhower Administration, indicating the probable influence of Congressional, newspaper, etc., and ultimately "public" opinion; related indications of a genuine public interest, e.g., increased sales of binoculars and telescopes; public opinion polls; Letters to the Editor; some comments of foreign newspapers,

as an indication of the source of influence on American opinion of the Soviet propaganda victory.

The major sources used include; United States Information Agency Files, composed of articles from American newspapers pertinent to the launch of Sputnik I; Department of State, American Opinion Reports, the New York Times Index, as a guide to the most prevalent opinions expressed by an influential public, those men whose comments would normally be responsible and published. Miscellaneous sources are fully recorded in the text. Also of value for additional material was "Statements of Prominent Americans on the Opening of the Space Age," NASA Historical Note No. 21, compiled by Lynne L. Daniels.

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October 5: "American scientists at a Soviet Embassy reception, while disappointed that the Russians had beaten them into space, breathed a sigh of relief. 'The pressure is off,' they said. 'Now we can concentrate on doing a good job.'" (NYT, 10/5/57, 1:6)

- . "Leaders of the United States earth satellite program were astonished tonight to learn that the Soviet Union had launched a satellite eight times heavier than that contemplated by this country." (NYT, 10/5/57, 1:6)
- . Chairman of the United States' program for the International Geophysical Year, Dr. Joseph Kaplan described the 184 pound weight of Sputnik I as "fantastic." (NYT, 10/5/57, 1:6)

October 6: According to a New York Times editorial, "The Soviet space satellite announcement appears to have been one of the world's greatest propaganda--as well as scientific--feats." (Editorial, NYT, 10/6/57, 43:3-4)

- . "The launching of the first earth satellite captured newspaper headlines and radio time around the world." The headline of the London Daily Express proclaimed "The Space Age is Here." "In Paris the new moon took all the play away from the French political crisis." (NYT, 10/6/57, 42:3)
- . Speaking at an Industry Appreciation Day in Calhoun, Ga., Senator Richard B. Russell (D.-Ga.), chairman of the Senate Armed Services Committee, said that the Soviet satellite launching confirms that the Russians have perfected an Intercontinental Ballistics Missile; that, from a military standpoint, it confronts us with a new and terrifying danger. (USIA Files; Wash. Post, 10/6/57)
- . Senator Mike Mansfield (D.-Mont.) cited the development as "additional proof that we must not underestimate the scientific skill and the technical know-how of the Soviet Union." (NYT, 10/6/57)
- . Senator Alexander Wiley (R.-Wisc.) saw "nothing to worry us." He said that it was "something to tell us to keep on our toes." (NYT, 10/6/57)
- . Senator Styles Bridges (R.-N.H.) said that the Soviet launching "calls for an immediate revision of national psychology and diplomatic approach. The time has clearly come to be less concerned with the depth of the pile on the new broadloom rug or the height of the tail fin on the new car and to be more prepared to shed blood, sweat and tears if this country and the free world are to survive." (NYT, 10/6/57)

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October 6: In a wire to Senator Richard P. Russell (D.-Ga.), Senator Symington said, "I respectfully but earnestly request that as chairman of the Armed Services Committee you arrange for complete hearings in this matter before the committee. Only in this way can the American people learn the truth. Putting it mildly, they have not been getting the truth." (NYT, 10/6/57)

October 7: The Washington Evening Star commented: "The advent of Russia's artificial moon, several months before ours is scheduled to go up, suggests that we have been a bit too sluggish, and perhaps just a bit too complacent..." (Editorial, Wash. Evening Star, Wash., D.C., quoted in NYT, 10/7/57; USIA Files)

- . The Chicago Daily News said: "The feeble rejoinder from Washington was that one rocket did not mean mass production, and that the situation remained unchanged. There can be no more underestimating Russia's scientific potential, either for war or peace." (Editorial, Daily News, Chicago, quoted in NYT, 10/7/57; USIA Files)
- . The News of Dallas said that: "Yet Russia's achievement is something to think about. In that totalitarian country scientists are told what to do. They can be quickly mobilized and their mass effort directed at any single objective...This is not advocating any thing of the sort here, but fully recognizing some advantages of tight, totalitarian control will be helpful to our democratic processes." (Editorial, The News, Dallas, Texas, quoted in NYT, 10/7/57; USIA Files)
- . According to the Herald Tribune: "This is a grave defeat for America... The Soviet satellite means that we have lost that supremacy in scientific research and development... The free world, ironically, has been harassing and hamstringing its own scientists. This is madness. What this nation needs is not the starving of research and development-- and its mismanagement by men like those recently in control of it, who were actually opposed to the very concept of basic research." (Editorial, Herald Tribune, quoted in NYT, 10/7/57; USIA Files)
- . "Initial reaction almost unanimously proclaims the Soviet satellite achievement 'a major triumph for the Kremlin in terms of enhancing its prestige' and boosting its propaganda throughout the world, holding that it gives the Kremlin 'material for propaganda that is far more spectacular and impressive than anything it ever had before.'" (Department of State, American Opinion Reports; 10/7/57; quotations from Harry Schwartz in NYT)
- . "Most observers warn against 'any lack of candor in recognizing the military significance of the Soviet moon.' To them it is 'eloquent confirmation' of the Russian claim that it successfully fired a long range ICBM. (Wash. Star; Chicago Tribune, NY Herald Tribune, Baltimore Sun, Philadelphia Inquirer, Marguarite Higgins, Sen. Jackson (D.-Wash.); Department of State American Opinion Reports 10/7/57)

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October 7: "A few hold that the satellite is 'primarily significant as a scientific instrument'--that it has 'no present war potential.'" (Wash. Star; The Most Rev. James H. Griffith of the Roman Catholic Archdiocese of NY, Sen. Wiley (R.-Wisc.), Erwin Canham on ABC, in Department of State American Opinion Reports, 10/7/57)

- . According to the Herald Tribune, many "voices, notably those of Senators Symington, Jackson, and Bridges, demand a reappraisal of the basic approach which has relegated American scientific progress to a position of second-best." (Department of State, American Opinion Reports, 10/7/57)
- . A New York Times editorial raised the questions: 1. Has the military balance of power changed? 2. Can budgetary and political considerations be put ahead of security considerations in allocating funds for defense? 3. Is a maximum effort being made to insure that the U.S. gets ICBM's? 4. "Why did not our policy makers realize the tremendous prestige, propaganda and political gains" of the first satellite? (NYT, 10/7/57, 1:2)
- . An editorial in the New York Times states: "Certain key decision makers... are presented by conflicting estimates prepared by different intelligence agencies; which of these estimates the decision maker will accept and act upon depends often, it is held, more upon the decision maker's own preconceptions than upon comparative analysis of the soundness of rival estimates." (NYT, 10/7/57, 16:5-6)
- . "The accuracy of the U.S. government intelligence information regarding Soviet capabilities is called into serious question again by the news of the Soviet space satellite achievement." In July, reporters were given "completely mistaken" information. (Editorial, NYT, 10/7/57, 16:5-6)
- . Il Popolo, Rome, the newspaper of the Christian Democratic party, congratulated the Russian technicians, and expressed hope for the "disappearance of that kind of satellite whose artificial character has been exposed by unrest in Poland and Hungary." (NYT, 10/7/57, 17:1)
- . The Communist newspaper of Vienna, Volkstimme, quoted Goethe: "Here and now begins a new epoch in world history." The non-Communist Die Presse stated that the "satellite is intended not primarily for scientific purposes or exploration of space but preparation of war on a planetary scale." (NYT, 10/7/57, 17:1)
- . Arriba, the organ of Spain's only legal political party, the Falange, expressed both "hope and fear" over the Soviet satellite. (NYT, 10/7/57, 17:1)

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October 7: The Tokyo newspapers "linked praise for the satellite scientific progress with fear as to military uses to which it could be put." (NYT, 10/7/57, 17:1)

October 8: "It's about time we woke up and had some concentrated effort ourselves," is the most prominently expressed view according to the Department of State, American Opinion Reports, (10/8/57).

- . "Senatorial reaction to the Soviet earth satellite divided along partisan lines," noted the New York Times, (10/8/57, 11:1)
- . The Preparedness Subcommittee of the Armed Forces Services Committee was "instructed to make a full inquiry and assemble all the facts," according to the New York Times, (10/8/57, 11:1)
- . Senator Mike Mansfield (D.-Mon.) said that the achievements of Soviet science "should not be tossed off lightly by the White House." The Soviet scientific developments "are not figments of the imagination." (NYT, 10/8/57)
- . Senator Jacob K. Javits (R.-N.Y.) insisted that there had been "no race to launch the satellite between us and the U.S.S.R. unless we create one now which is directly contrary to our policy." He said the country should not "put pressure on our scientists in this way." (NYT, 10/8/57)
- . In a speech to the National Women's Democratic Club in Washington, D.C., former Senator William Benton (D.-Conn.) said that Soviet scientific progress "shows the folly of our defense cut backs with a jolting shock as nothing else could. I foretell these tragic blunders of the Administration will show up in the elections of 1958 and 1960." (NYT, 10/8/57)

October 9: Sen. Henry M. Jackson (D.-Wash.) called Russia's launching of the satellite a "devastating blow to the prestige of the U.S. as a leader in the scientific and technical world." (Facts on File, 10/9/57, 322 B-B1)

- . Western scientists were impressed by the altitude of the Soviet satellite, twice the Vanguard sphere's projected 300 miles. (Facts on File, 10/9/57, 321 F3)
- . Secretary of Defense Neil McElroy is quoted as saying: "The Department of Defense is studying ways to remove 'bottlenecks' in the United States' missile development program to speed production of an operational ICBM." The speedup had been spurred by the strength of the (rocket) launcher that put the Russian satellite in the air. (Facts on File, 10/9/57, 330 C3).

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October 9: President Eisenhower said that the Soviet satellite had not raised his apprehension over U.S. security by "one iota."
(Facts on File, 10/9/57, 330 G2)

- . Senate GOP Policy Committee Chairman Styles Bridges stated that the "implications" of the Soviet ICBM and satellite were "serious," but that the Red "breakthrough" into outer space should not cause "immediate hysterical alarm." (Facts on File, 10/9/57, 331).
- . President Eisenhower, speaking at an October 9 News Conference:
"I see nothing at this stage of development that is significant in the Russian Sputnik as far as security is concerned." (Military Mission in Space, p. 2)
- . The Russian objective is "not merely to impress neutralist nations, but to intimidate waverers, make propagandistic hay in areas like the Middle East, and drive wedges between the U.S. and some of its allies." (Wash. Star; Wash. Post. and Times Herald, NYT in Department of State American Opinion Reports, 10/9/57).
- . "While the military significance of the Soviet satellite achievement is still in the foreground of discussion, several observers hold that the important question is no longer entirely "whether the U.S. or the U.S.S.R. is ahead in the rocketry field, "the important question is that the Russians apparently plan to use their" new instruments for rocket diplomacy, to cow the world into submission" on Soviet terms. (NYT from Department of State, American Opinion Reports, 10/9/57)
- . The Senate Armed Services Committee initiated an inquiry to see if U.S. programs lagged due to "service rivalries." (NYT 10/9/57, 1:5)

October 10: The Philadelphia Bulletin commented: "The Russian satellite will serve us a useful turn if it shakes us out of our complacency."
(Department of State, American Opinion Reports, 10/10/57)

- . The Washington Post and Times Herald, along with the Washington News and the New York Herald Tribune found: "President Eisenhower's reassurances yesterday (on the military significance of Sputnik) not very reassuring." (Department of State, American Opinion Reports, 10/10/57)
- . The Philadelphia Inquirer finds the President's comments "reassuring to a degree, since they tend to counter some of the more fantastic fears expressed," but suggests that the launching of the Red satellite "should be a signal for a careful restudy of our defense policies - especially regarding long-range missiles - and of our moves in cold-war propaganda." (Department of State, American Opinion Reports, 10/10/57).

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October 10: An editorial in the Christian Science Monitor included the following comment: "Have we done enough in the field of technical education? We hear the beep of the satellite and answer no. Have we been niggardly about missile research? Beep - beep. And we answer yes." (Christian Science Monitor, 10/10/57; USIA Files)

- . In a newspaper column, Walter Lippmann recorded the following comments: "This is a grim business. It is grim, in my mind at least, not because I think the Soviets have such a lead in the race of armaments that we may be soon at their mercy. Not at all. It is a grim business because a society cannot stand still. If it loses the momentum of its own progress, it will deteriorate and decline, lacking purpose and losing confidence in itself... With the President in a kind of partial retirement, there is no standard raised to which people can repair. Thus we drift with no one to state our purposes and to make policy..." (NY Herald Tribune 10/10/57; USIA Files)
- . According to an editorial in The New York Times, Sputnik has brought about "the growing belief of Democratic politicians that the Sputnik has given them a winning electoral issue, and enabled them to break the barrier in American public opinion created by the general reliance heretofore on the Soldier President as the indisputable and final authority on the needs and status of national security." (NYT, 10/10/57, 32:5)
- . The city's major department stores report "a mild rush" for binoculars and telescopes. Sales had increased from 50% to 75%. (NYT, 10/10/57, 50:2)

October 11: "Calls for energetic U.S. action and for an assessment of past mistakes continue prominent in comment stimulated by Russia's satellite achievement." (Department of State, American Opinion Reports, 10/11/57)

- . An editorial in Scripps-Howard's Washington News commented: "The balance of military power is in the process of shifting in favor of the Soviets. The future is ominous, but not hopeless if American wakes up." (Department of State, American Opinion Reports, 10/11/57)
- . The American Council on Education annual conference "demanded today that the U.S. wake up to the dangers of educational neglect." (NYT, 10/11/57, 11:1)

October 12: L'Osservatore, the Vatican newspaper, stated that "God has no intention of setting a limit to the efforts of man to conquer space." (NYT, 10/12/57, 3:2)

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October 13: Combined College Conference in Harriman, New York, Prof. John R. Dunning said, "While the Soviets have already begun their exploitation of this new and awesome age, we have not because our people, our government, and our schools have not yet grasped its full significance. With the power to channel human efforts along those paths best serving the Communist system, that system has been able to produce scientists and engineers in certainly greater numbers and quite possibly of higher technical proficiency than our own." (NYT, 10/13/57)

October 14: Senator Stuart Symington (D.-Mo) remarked that "The people are not only ignorant... but it begins to look as though they have been misled," in connection with official information regarding the state of U.S. missile and satellite programs. (Facts on File, 10/14/57, 331)

- . Admiral Jerauld Wright, Commander of Allied naval forces in the Atlantic, opposed an all-out "crash" program. On ABC's "College Press Conference", he said that the United States and its allies were already engaged in "a maximum effort" to develop both the satellite and ICBM. (NYT, 10/14/57, 18:7)
- . Representative Earl Wilson (R.-Indiana) offered a proposal that the United States establish a "West Point of the Sciences" to train scientists and engineers. (NYT, 10/14/57, 18:6)
- . Rep. Kenneth B. Keating (R.-N.Y.) "called for a 'Manhattan Project' of international dimensions to co-ordinate and bring to perfection the satellite missile projects of all the North Atlantic Treaty Organization nations." (NYT, 10/14/57, 18:6)
- . "Perhaps the most powerful demand for a congressional inquiry from within the President's own party" was that of Sen. William F. Knowland (R.-Calif.). Appearing on CBS' "Face the Nation" (TV), he "called for a bipartisan review of the entire U.S. defense effort that would rule out politics in assessing past responsibility and planning for the future." (NYT, 10/14/57, 1:1)

October 15: "The continuing voluminous comment" stimulated by Sputnik "continues to reflect criticism of U.S. policy and a feeling that decisive action to overcome the Soviet lead is imperative. Among the most vocal advocates of U.S. action continue to be the NY Herald Tribune, the Philadelphia Inquirer, the Washington Post and Times Herald." (Department of State, American Opinion Reports, 10/15/57)

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October 15: Edward R. Murrow (CBS) stated that "the key men in Washington had not the imagination to understand what it would mean for the Soviet Union to launch its satellite first." (Department of State, American Opinion Reports, 10/15/57)

- . A Milwaukee Journal editorial headed "Nothing but Contradictions, Double Talk on Sputnik" included a list of contradictory statements by American leaders on the subject of Sputnik and military security. (Department of State, American Opinion Reports, 10/15/57)

October 16: A New York Times' editorial entitled "An Ill Wind" asserted that "if Russia's success in launching an earth satellite manages to shake the American people and America's political leaders out of our comfort-ridden complacency, then the Soviet scientists will actually have done us a good turn." (NYT, 10/16/57, 34:3)

- . In a Letter-to-the-Editor, H. C. Allen, historian from Charlottesville, Va., demanded that the U.S. "restore forthwith full and unlimited British-American cooperation in military-scientific effort... We have consistently and gravely underestimated the Russian achievement, but above all that the only time when we really enjoyed an ~~un~~challenged lead over Russia in this sphere was when we had a joint Anglo-Canadian-American project.: (NYT, 10/16/57, 34:6)

October 17: In an address at the International Industrial Development Conference, California, Vice-President Richard M. Nixon stated that "the only major military significance of the Russian Sputnik is that the Soviet Union demonstrated that they had developed the capacity to fire a missile a great number of miles." (Military Mission in Space, p. 12)

October 18: In recognition of the fact that the race in the missile field is "a race for our survival... President Eisenhower, after consultations with defense officials and scientists, has ordered a speed-up in the missile program." (NYT, 10/18/57, 22:1)

- . Many observers voiced concern over its (Sputnik's) impact on our allies, including Dorothy Thompson, Marguarite Higgins, and Mrs. Luce in the NY Herald Tribune, Constantine Brown, and Senators Kefauver (D.-Tenn.) and Monroney (D.-Okla.); from the Department of State, American Opinion Reports, 10/18/57)
- . "The danger today is that our allies, even in Western Europe, might downgrade their reliance on the U.S., shift to a neutral stand," Business Week argues. (Department of State, American Opinion Reports, 10/18/57)

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October 18: Calling for a pooling of NATO's scientific talents were the New York Times, Governor Harriman (NY), Business Week, Senators Humphrey (D.-Minn.) and Wiley (R.-Wis.); from the Department of State, American Opinion Reports, 10/18/57.)

October 20: A Gallup Poll taken a week to ten days after Sputnik was launched in Washington, D.C. and Chicago indicated the impact of the satellite on public opinion. Asked whether the Russian satellite was "a serious blow to U.S prestige," 43% answered "yes," 46%, "no"; 11% were undecided. Asked if surprised "that the Russians were able to do this before the United States," 51% said "yes", 44% said "no"; 5% did not respond. 61% affirmative against 16% negative thought that the satellite is "more likely to be used for good purposes than bad purposes." "A clear majority (61% to 18%) registered confidence that the next great advancement of this nature would be made by the United States, not Russia." (Department of State, American Opinion Reports)

- . "The Soviet launching of an earth satellite has drawn a huge volume of comment, much of it reflecting grave concern about the relative position of the United States in the field of scientific research in general and missiles achievement in particular. The point of widest agreement was that Russia had made a great propaganda gain..." (Department of State, American Opinion Report, 10/20/57)
- . "A prominent note in early comment on the achievement was emphasis on the urgent need for counterbalancing action by the United States." (Department of State, American Opinion Reports, 10/20/57)
- . A Gallup Poll reported that "about half of the general public believes that Russia is moving ahead of the United States in the development of missiles and long distance rockets." 49% said yes; 32% no; 19% no opinion. (Department of State, American Opinion Reports, 10/20/57)
- . The Democratic Advisory Council charged today that the Eisenhower Administration had subordinated national security to domestic politics and budget goals." (NYT, 10/20/57, 1:7)
- . "The advent of the Soviet earth satellite has heightened the interest in rocket mail..." This resulted in a "soaring demand for the covers and a consequent rise in values..." (NYT, 10/20/57, 14:1)
- . Sherman Adams, Assistant to the President, "last week minimized 'Soviet satellites that sail over our heads and land on the front page of every American newspaper.'" He also stated that the United States had not tried to compete with the Russian satellite program because "the serving of science, not high score in an outer space basketball game, has been and still is our country's goal." (NYT, 10/20/57, 1:5)

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October 20: Vice-President Nixon, speaking in San Francisco, said that "we could make no greater mistake than to brush off this event [Sputnik] as a scientific stunt..." (NYT, 10/20/57, 1:5)

October 21: Appearing on ABC's "College News Conference" (TV), Walter P. Reuther, Vice President of the AFofL and the CIO, stated that Labor would make "every sacrifice necessary" for the success of an emergency program to outstrip the Soviet Union in the missile and satellite field. (NYT, 10/21/57, 13:3-4)

October 24: "President Eisenhower announced last night that he would make a series of talks to reassure the American people on the nation's defense and scientific programs..." His speaking tour reflects an "Administration conclusion that the combination of the Soviet satellite and the Middle Eastern crisis has hurt the Republican party where it can do the most damage..." Sputnik has "tended to shake voter confidence in the ability of the Republicans to do a better job than the Democrats in the fields of foreign policy and national defense. The prestige of the President has dropped abruptly and alarmingly." (NYT, 10/24/57, 1:5)

- "Normally Republican publications that have supported General Eisenhower before, during, and after election campaigns, have published editorials and columns, charging that he has been 'indolent', that he has been a 'part-time' and 'reluctant' leader who spent entirely too much time on the golf course and not enough on the nation's business. (NYT, 10/24/57, 15:6)

October 26: An Indiana University Extension Center poll of students indicated that 10% of first and second year students answered that they didn't know that the Soviet Union had launched a satellite. (NYT, 10/26/57, 6:6)

October 29: "Announcement of a projected series of talks by the President has been welcomed, but in some cases the welcome is contingent upon what he says and does. "The President will need to come armed with facts, proof of progress and solid evidence of action to dissipate the clouds of doubt now hovering across the land.'" (Milwaukee Journal, quoted in the Department of State, American Opinion Reports, 10/29/57)

October 31: An editorial in the New York Times warned that American accomplishments in rockets and missiles "should not be lost in a dog-fight among the services." (NYT, 10/31/57, 30:2)

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October 31: In a Letter-to-the-Editor, Victor Lasky asked why it isn't "possible for Soviet science, responsible for this remarkable achievement, Sputnik to provide the means whereby the abysmally low standard of living of the average Soviet citizen is raised to levels more in keeping with a modern industrial society." (NYT, 10/31/57, 30:7)

During October: Bertrand Russell said: "The two Sputniks have astonished the non-scientific world, although competent physicists have been well aware for some time that such projectiles would be possible if not now at any rate, with in a few years. The general public in the West has had a two-fold reaction: one of admiration for technical achievement, and the other of terror caused by the discovery of Russian scientific supremacy." (article "Can Scientific Man Survive?", reprinted from London Sunday Times, Challenge of the Sputniks, pp 93-96).

November 1: The Eisenhower-Macmillan agreement with respect to pooling scientific knowledge and resources continues to receive strong editorial endorsement from journals of varying political outlook: San Francisco Chronicle, Houston Post, Watertown News, New Bedford Standard-Times, Birmingham News, Cincinnati Enquirer, Youngstown Vindicator, St. Paul Pioneer Press, Detroit News, Atlanta Constitution, Life magazine. (Department of State, American Opinion Reports, 11/1/57)

November 4: "Russia's launching of a second earth satellite appears to have intensified the apprehension aroused by the first Sputnik and given new stimulus to the demands for accelerated U.S. scientific efforts." (Department of State, American Opinion Reports, 11/4/57)

. Following the launch of the second Russian satellite, demands for the U.S. to overcome the Soviet lead came from Senators O'Mahoney (D.-Wyo.), Humphrey (D.-Minn.), Jackson (D.-Wash.), Anderson (D.-N.Mexico), Kefauver (D.-Tenn.) from the Department of State, American Opinion Reports, 11/4/57)

November 6: In a speech at St. Alban's Convocation, Army General Omar Bradley said: "We can compete with a sputnik and probably create bigger and better sputniks of our own, but what are we doing to prevent the sputnik from evolving into just one more weapons system? If I am sometimes discouraged, it is not because of the magnitude of the problem, but by our colossal indifference to it." (NYT, 11/6/57)

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November 7: President Eisenhower appointed Dr. James R. Killian, President of the Massachusetts Institute of Technology, as Special Assistant to the President for Science and Technology. "Dr. Killian would be aided by a staff of scientists and an advisory group of experts, the objective being to strengthen the nation's scientific program." (Social Effects of Sputnik, pp. 10-11)

- Concerning the announcement of the President's speech to the country, the view expressed by most revealed "a widespread feeling that this time generalities and simple assurances will not suffice, that most people want the medicine straight, no matter how distasteful." (Eric Sevareid (CBS); Wall Street Journal from the Department of State, American Opinion Reports, 11/7/57).
- Ten Republican members of the House of Representatives are reported as asking the President to give the people the facts in his speech..." (Department of State, American Opinion Reports, 11/7/57)

November 11: In a Jefferson City, Mo., address, Senator Stuart Symington (D.-Mo.) said that "the race for the conquest of space is today's major engagement in the technological war. We must win it, because the nation which dominates the air spaces will be in a position to dominate the world." (The Military Mission in Space, p. 16)

- In an Oklahoma City Speech President Eisenhower said that "my scientific advisers place this problem above all other immediate tasks of producing missiles, of developing new techniques in the armed forces: we need scientists." (Challenge of the Sputniks, p. 40)

November 12: "The reaction to President Eisenhower's address on science in national security is predominantly favorable, but a considerable number view it as in the nature of a good beginning, and others hold that he has not said or done enough." (Department of State, American Opinion Reports, 11/12/57)

November 17: An article by Milton Esterow stated that "the Soviet earth satellites have created a minor boom in what used to be the never-never land of science fiction..." A survey yesterday of publishers, stores, libraries, and writers indicated: 1. Increased sales of science fiction books and magazines; 2. A marked increase in the use of nonfiction science books, especially those on rockets and missiles, in libraries in this area." (NYT, 11/17/57, 16:1-4)

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November 17: A spokesman for the Brooklyn Public Library said: "There's been a run also on periodicals dealing with jet propulsion, as well as the works of Jules Verne." (NYT, 11/17/63, 66:4)

- . Publishers of comic books said that the satellites would effect forthcoming plots. (NYT, 11/17/57, 66:4)

November 18: A Newsweek survey of "hundreds of on-the-spot interviews throughout the nation" indicated "a dawning realization that supposedly backward Russia had somehow beaten the U.S. at its own game of science, technology, and know-how," a "growing belief that the world is entering a new era of space exploration - and this country has failed to lead," and, third, "a determination to catch up - and fast." (Newsweek, 11/18/57, from The National Space Program, pp 25-26)

November 19: "Comment on President Eisenhower's speech reflects beliefs that : 1) it offered needed leadership; 2) it failed to go far enough; 3) a considerable effort should be made to balance the government's budget." (Department of State, American Opinion Reports, 11/19/57)

November 25: Dr. Vannevar Bush: "We know that the Russians have now exceeded our performance in that /space/ area, that they have put into an orbit a projectile weighing one half a ton while we have thrown a few particles in outer space... It has been a great shock to the country thus to learn that in a field where we thought we were doing well, we have been exceeded by their performance... It would be a... grim situation if we faced a situation in which the enemy could devastate us and we could not reply. We must never let that condition come about, because that would be altogether too inviting for those who reside in the Kremlin... So this is far more than merely a problem of an advance in weapons. This country faces definitely a situation where it must prevent at all costs being in the position where it can be overcome without the possibility of answering... We have been complacent, and we have been smug. We all of us in this country have had a rude surprise. Now that we have had the surprise, I am far more optimistic than before the sputnik influence, because I have every confidence that the American people, now aroused, will move forward effectively. But we have had a rude awakening and the first thing for us to do, the country as a whole, is to divest ourselves of our smugness and complacency and get to work." (Congress, Senate Preparedness Investigating Subcommittee on Armed Service, Part I, Hearings, 11/25/57)

- . Senate Hearing, Dr. Edward Teller: "I am afraid when I said that sputnik was no surprise to the scientists, perhaps I have overstated the case. It was no surprise to some scientists, and generally it was a lesser surprise to the scientific community, a considerably lesser surprise, than it was, as far as I can judge, to the public." (Congress, Senate, Preparedness Investigating Subcommittee on Armed Services, Part I, Hearings, 11/25/57)

1957

December 4: "Many commentators found great danger in the possibility that America might permit the Soviets to use their missiles to 'black-mail' their way to a cold war victory. These writers urged America to particularly 'intensify its efforts in the field of psychological peace fare.'" (Gen. David Sarnoff of RCA; Dean Acheson, Time magazine, Birmingham News; from the Department of State, American Opinion Reports, 12/4/57)

• "Some counseled the West to neglect no genuine opportunity to negotiate peaceful co-existence with the Soviet Union, and to remember that since 'we no longer negotiate from superior (military) strength' we will have to adjust 'our techniques of consultations, our habits of thought... and our tone of voice' accordingly." (Edward R. Murrow on CBS; similarly Marguarite Higgins, Industrialist Cyrus Eaton; from the Department of State, American Opinion Reports, 12/4/57)

December 5: An editorial entitled "Man Into Space" commented that "it is one of the ironies of history that the steps already taken toward that conquest (of space) have received much of their impetus from the arms race between our own country and the Soviet Union." The American satellite program developed as a separate scientific project of IGY. The Russian sputnik was made possible by rocket motors developed for an ICBM. The editorial points out that, in a moral view, this is to our credit. (NYT, 12/5/57, 34:1)

December 10: "The failure of the Vanguard satellite rocket had drawn expressions of concern about the effect of the failure on U.S. prestige abroad, and considerable discussion of the publicity that preceded the launching. A number of those commenting hold the view expressed by the Providence Journal that "in the eyes of the world, we have lost a measure of pretige and respect which will be difficult to recapture." (Department of State, American Opinions Report, 12/10/57)

December 16: An article written by Homer Bigart expressed the view that "basic scientific research never adequately supported in the United States, is likely to be gutted with money as a result of the national humiliation over the Soviet earth satellites...Overnight, the starved status of basic research has become a public issue." (NYT, 12/16/57, 1:6)

December 30: "Most of the comment on proposed US-Soviet negotiations for arms reduction and the easing of cold war tensions favors continuing U.S. efforts to negotiate on one level or another. As the Louisville Courier-Journal expresses it, we 'cannot afford not to negotiate, with constancy, determination, and the utmost seriousness.'" (Department of State, American Opinion Reports, 12/30/57)

1958

1958

January 3: "As Americans consider U.S. foreign policy at the beginning of 1958, the Soviet "challenge" to the free world remains the dominant concern. There is uneasiness and uncertainty about the future of the western alliance under the double impact of Russian development of missile power and the Kremlin's persistent "peace" propaganda.... On the need for acceleration of U.S. efforts in missilery there is general agreement, and most of those commenting declare that the U.S. must constantly show its willingness to participate in any talks with the Russians which offer any promise of reducing world tensions--if only to demonstrate that it is they, rather than we, who are obstructing peace." (Department of State, American Opinion Reports, 1/3/58)

January 6: Samuel Lubell, political analyst, in the Columbia University Forum, wrote that reaction to Sputnik is shaped mainly by a person's economic position. A six week survey of New York and New Jersey showed that "those whose concern over unemployment led them to favor more government spending voiced considerably more alarm over Sputnik than those who were troubled by fears of economic recession or who were eager to see taxes reduced." (NYT, 1/6/58, 29:7)

January 9: In his State-of-the-Union address, President Eisenhower said that "admittedly, most of us did not anticipate the intensity of the psychological impact upon the world of the launching of the first earth satellite." (Facts on File, 1/9/58).

January 18: "The Dutchess County Sheriff reported today that rocket building and testing by youths or inexperienced adults was against New York State Law... Sheriff Fred C. Close said that he had received numerous inquiries from boys and girls wanting to form rocket clubs..." (NYT, 1/18/58, 36:1)

January 29: "The Army Ballistic Missile Agency announced today it would soon offer an illustrated pamphlet on rocketry for amateur rocketeers." (NYT, 1/29/58, 16:3)

During January: Dr. Lloyd V. Berkner writes: "The vital point is not so much that the Soviet satellite preceded that of the United States, heretofore credited as the leader of world technology; it is that the United States, for the first time, finds a challenging competitor in the most advanced scientific fields. The achievement of the Soviet satellite has demonstrated to Americans what they refused to believe before, that they are in a race for intellectual leadership when they hadn't realized that there was a race, or even that another nation had the capability to challenge their technology. In the complacency of our assumed technological lead, we have confused our high standards of living and material prosperity with intellectual stature. It is an extravagant and dangerous mistake." (Earth Satellites and Foreign

During January (continued)

Policy," in Foreign Affairs, XXXVI, pp 221-231, January 1958).

February 15: "New Jersey, concerned over the increase in serious accidents involving minors testing homemade rocket, moved today to halt the practice." (NYT, 2/15/58, 8:5)

April 3: According to an editorial in Aviation Age, "national security demands an early change in the Defense Department structure... The dead weight of civilian bureaucratic fat impedes bold decisions in the Defense Department. This fat is composed of layers of secretaries, assistant secretaries, etc. Most of them have no legal responsibilities, but they can give directives to the military chiefs. It is authority without responsibility." (Aviation Age, April 1958, p. 8)

- . RE the duplication in earth satellite projects and missile programs:
 "Only men who are completely unaware of the exacting requirements of missile development, only men who are technically incompetent in the very fields most affected by their policy decisions... could have reached some such conclusions." Stated by Dr. A. R. Hibbs, Chief of Jet Propulsion Lab's research analysis section, in Readers Round Table of Aviation Age, p. 214, April 1958.

May 1: Two University of Michigan polls, conducted by the Survey Research Center, were taken approximately six months before and after the launching of Sputnik 1. The polls employed primary sampling units to give a profile of selected social characteristics that "match the nation as a whole." The results are as follows:

1. "Almost half the adult population of the nation became aware of the earth satellites in a year. This is all but 8% of those previously unaware of the satellites. Most of this awareness was gained during the few weeks following the launching of Sputnik 1."
2. (survey of 1540 people)

	<u>Before</u>	<u>After</u>
a. heard of satellite	46%	91%
b. heard nothing	54%	8%
c. not ascertained	-	1%
3. "At least two-thirds of respondents in every category of social characteristics have (post-Sputnik) now heard of satellites. More than one-third of every category are able to state a purpose for the satellites."
4. More men than women (94%-89%) have at least heard of the satellites.
5. Men are also more likely to emphasize a scientific purpose (for satellites).
6. The higher the education of the respondent the more likely he is to have heard of the satellites, to specify a purpose to them, and

to mention detailed information as to the purpose."

7. "Less than one third of those aware of the satellites thought of them as having primarily an immediate scientific purpose.... There was no increase (in surveys pre- and post-Sputnik I) in the proportion of the public seeing scientific information as the major purpose."

8. Earth Satellite Purpose	Before	After
a. scientific (detailed information) ----	12%	11%
b. scientific (general information) ----	8%	16%
c. competition with Russia -----	1%	20%
d. future possibilities	-	17%

9. "A majority of respondents in the post-Sputnik sample were shown to give no clear edge to either America or Russia in the science race." In November of 1957, one in four regarded Russian science as superior. In May of 1958, one out of twelve, 8% of the population, thought Russia superior. Those who thought Russia and the United States about the same increased from 16% to 26%; those who saw Russia as superior in some areas, not in others jumped from 18% to 33%. The numbers who thought the U.S. superior remained unchanged.

10. "The extent of similarity (between pre- and post-Sputnik surveys) was remarkable in: net impact of science; responsibility for the bad effects of science; and the personal characteristics and motivation attributed to scientists."

11. In both pre- and post-Sputnik surveys, the largest area of responsibility for the bad effects of science was attributed to scientists (12%) and to politicians (12%).

12. Both pre- and post-Sputnik inquiries showed that about 50% of the respondents felt that "atomic annihilation, war, weapons, related atomic items" were "bad effects of science."

13. Both pre- and post-Sputnik surveys showed that people attribute most to good effects of science: (1) improved health and medical treatment; (2) higher standards of living; (3) industrial and technological improvements.

14. Of four listed projects, including putting the first man on the moon, and basic research in the sciences like chemistry and physics, "more than one-half stated a preference for medical science" if money were available for only one project; one-third chose juvenile delinquency research.

15. Only 12% of newspaper readers in the second study said they skip over science news, whereas previously 18% said they skipped it.

July 29: President Eisenhower signed into law the National Aeronautics and Space Act, creating the National Aeronautics and Space Administration.

December 21: Dr. William Shockley, 1956 winner of the Nobel Prize in Physics, in a paper for the American Physical Society, called for the creation of an Institute of Public Enlightenment which should protect the people from "surprises from events like Sputnik." (NYT 12/21/58, 8:6)

During 1958: In book entitled The Challenge of the Sputniks, editor Richard Witkin states:

"The public -as the American public always will in times of stress- joked. It joked of Sputnik cocktails (one third vodka, two thirds sour grapes)."

Recounting the events engendered by Sputnik, he says: "Four days after Sputnik Number Two went up, and a week before planned, the President delivered his first speech of reassessment. And a week later, his second....He named James R. Killian a special assistant to coordinate the new scientific defense effort. He said dispersal of Strategic Air Command bases would have to be accelerated."

"A Senate committee began an investigation of the nation's lagging missile and space program. It had no sooner begun than President Eisenhower suffered a mild stroke. This could not help but intensify the mood of uncertainty and self-doubt that had suffused the nation with the launching of the first Sputnik. The melancholy curve took another sharp dip, when the Vanguard rocket could rise only a few feet....before bursting into flames."

He also writes of "a decided though still unmeasurable readjustment of attitudes toward the universe, though we are still too close to the event to gauge accurately the psychological shift, it is probably no exaggeration to compare it to the beginning of the readjustment of man to a round instead of a flat world." (Witkin, pp. 4-7)

- . In the opinion of Bernard Baruch, "Sputnik is more than a satellite hurtling through space, ...Sputnik represents a test of democracy." (Challenge of the Sputniks, p.20)
- . Sputnik has been "warped to the uses of a psychological weapon expressly designed for the intimidation of the free peoples of the earth. It is plain that such a use of a scientific research device is absolutely contrary to the spirit and the intention of the International Geophysical Year..." according to David Woodbury. In face of the situation, "a new vigor must be infused into our military rocket program..., we must face the probability that Russia, while diverting attention with continuous propaganda and intimidation, will sneak into space and make gains there that will put us hopelessly behind..., we must do something at once about our lagging interest in scientific education." (Around the World in 90 Minutes, pp. xii-xiv, xix-xx)

During 1958: A New York University Survey of US Newspaper Managing Editors in 1958 proved that three out of four newspaper managing editors reported an increase of 50% or more in the amount of space given science by their paper since the Sputnik launching. (Satellites, Science and the Public, p. 1)

- . A Report on the National Defense Education Act (1958) stated that "Congress recognized that the defense and the security of the Nation are inseparably bound with education." The act offered financial assistance for students, teachers and guidance counselors, encouraged studies in mathematics, physical sciences, engineering and modern foreign languages. (Social Effects of Sputnik, p. 19)

1959

1959

October: Results of a poll conducted by the Los Angeles Mirror showed:

1. Blame for the Russian lead -
 - a. bickering by military services over space roles - 22%
 - b. inaction by the Democrat Administration 1945-52 - 11.4%
 - c. inaction by the Republican Administration since 1952 after Russian advances became known ----- 36%
 - d. failure of the American people to show concern and communicate it to our leaders ----- 22%
2. A majority of respondents to the poll were "willing to pay \$50 a year or more in income taxes, IF the money will be used for space research to put the US back in the lead."
3. 33% would be willing to see reductions in farm subsidies, 12.9% in veterans' benefits, 25.1% in foreign aid - to provide money for space projects.
4. Frequently comments were added to the questionnaire.
 1. "Our government has suppressed the facts from the people, keeping up the pretense that everything was fine until quite recently."
 2. "So many of our educators, government officials and military leaders - even the President himself - rushed to the defense of our unpreparedness that the nation's alarm gradually faded away."
 3. "Blame the administration."
 4. "Our government has lied and won't tell the people what they should know."
 5. "What this country really needs is a Taft-Hartley injunction to make Ike stay in the White House and be President for 80 successive days."
 6. "Our biggest problem, in my mind, is our lack of a national purpose, a national goal where the strength, energy and genius that made us great can once again be brought into play behind a carefully thought-out mode of action." (NASA Historical Files)

November 6: Special Assistant to the President for Science and Technology, Dr. Kistiakowsky, is quoted as saying "we need to revise the image of the intellectual, to demonstrate that the scientist... leads a life filled with interest and variety, and is able to make his full contribution to community life." (Challenge of the Sputniks, pp. 6-7)

During 1959: The President's Science Advisory Committee, in a paper entitled "Education for the Age of Science," emphasized the need to attract students to careers in mathematics, physical sciences, and engineering. "Today the frontier is intellectual." (Social Effects of Sputnik, p. 11)

1960

1960

January 8: A Gallup poll has shown that the two "most outstanding" events of 1959 were "space activity", and the exchange of visits between Eisenhower and Khrushchev. (NY Herald Tribune, 1/8/60)

January 23: George V. Allen, then Director of the USIA, reported that "the successful launching of Sputnik 1 created an intensity of reaction throughout the world which has rarely been paralleled by any other single discovery or invention... The achievement of placing in orbit the first earth satellite, without great advance fanfare, increased the prestige of the Soviet Union tremendously and produces a corresponding loss of US prestige, due primarily to the contrast...The Soviets were greatly exceeding world expectation of their scientific and technological capacities; we, on the other hand, were falling short of world expectation of us." (NYT, 1/23/60)

During April: February and April 1960 polls of the British public of groups around 1000 people, showed the British thought the USSR ahead in scientific development, and a larger percentage felt that Russia was ahead in space development. (NYT, 10/27/60; NASA Historical Files)

During 1960: "Sputnik brought some political disadvantage for President Eisenhower, and it may be that Vice President Nixon had to suffer from this (in part) during the presidential campaign of 1960." (Social Effects of Sputnik, p. 20)

- . During the 1960 Presidential campaign, Vice President Richard Nixon said, in a white paper, that "Senator Kennedy attempts to hitch his political wagon to the Soviet Sputnik, charging that the administration is allowing the Soviets to outdistance us in the exploration of space....[This] is irresponsibility of the worst sort for an American Presidential candidate to obscure the truth about America's magnificent achievements in space in an attempt to win votes." (The Space Race, pp. 148-49)
- . Senator Lyndon Johnson, Democratic Vice Presidential candidate, accused the administration of "drift, delay, and dilution" in meeting the Soviet challenge in space. In a white paper he spoke of complacency, foot-dragging and indifference in our space efforts, and of the further hindrance of budget limitations. (The Space Race, p. 151)
- . During the 1960 Presidential campaign, James Fulton (R.-Penna.) stated that "This is the first time a Presidential campaign has been started in outer space rather than in the ordinary atmosphere." (The Space Race, p. 150)

1961

1961

December 28: In "The Social Effects of Sputnik," a paper delivered at the annual meeting of the Society for the History of Technology, Washington, D.C., Dr. Francis K. Allen, professor of sociology at Florida State University, stated:

"American society is generally cordial to scientific and technological developments, and would normally (in peacetime) value the Sputnik type of achievement," but that Sputnik "encompassed no less than a major contest involving our entire intellectual and educational strength--virtually a challenge to American civilization." Specifically, "our interest is centered on the original group (which we vaguely identify as Sputniks I, II, III); they showed a new, sustained, and major human activity had begun."

Dr. Allen went on to speak of the immediate effects of Sputnik: "The U.S. Government was shocked because it had grossly underestimated the public impact of the event."

"The initial effect of the Sputniks was to produce a state of shock. The American public...was almost totally unprepared for the Soviet success." "Certain U.S. scientists and specialists, who had not underestimated the impact were shocked because of the deprecatory statements issuing from high American officials regarding the accomplishment."

"The tremendous (missile) boosts had important military implications; it was evident that the U.S. lagged considerably in missile development...The American people and their leaders were concerned that the Soviets might have a military advantage which could be quickly exploited for victory in war."

"In having to be content with second position in space developments Americans (including American scientists) were quick to criticize...They complained of insufficient political support for American science; of the budgetary ceiling that had been placed on these efforts; of the attitudes of various government administrators (who were held to be unsympathetic to science); and of the incessant bickering among the military services for whom many scientists worked." Voicing "selective criticism" of specific government policies which hindered scientists in their work, Professor Allen cited "the mountains of paperwork seemingly necessary when working under government auspices," "the hundreds of conferences," and "the elaborate coordination and the many reviews of ideas."

Dr. Allen noted that the Eisenhower administration, and in particular the President himself, was strongly attacked during this period, as were the Secretary of Defense Charles E. Wilson and the Deputy Secretary of Defense Donald A. Quarles. Persistently demanded were new policies, a new determination to be nationally strong, and a new determination to work for peace. "Demands came for a thorough investigation to determine American versus Russian progress in space developments, relating especially to such matters as effects on military strength, support of the U.S. defense effort by the scientific community (had the Eisenhower administration

1961

December 28 (continued)

alienated many scientists?) and delayed results caused by an acrimonious inter-service rivalry in the Pentagon." In short, "Reactions of citizens which, in aggregate, manifested themselves as public opinion, pressed leadership for action to meet the challenge."

And upon the heels of the many criticisms and demands came major changes:

"One of the most important results to emerge from the shock of Sputnik I was the recognition of the importance of science in governmental affairs and planning." Further, "...the desire to emulate the Sputnik achievement (and if possible to surpass) was strong in this case. Traditional resistances to innovation were negligible. No vested-interests resistance was encountered."

"Following Sputnik I a worried U.S. public was able to bring changes that certain military and industrial leaders had long been trying to do; the \$38 billion ceiling on the defense budget was removed, and other improvements were made."

And in conclusion, Sputnik "shows how a modern society reacts to what is realized to be a major challenge."

1 9 6 2

1963

1962

May 16: Roswell L. Gilpatric, Deputy Secretary of Defense, said in a speech in San Francisco that "It was the Soviet Union's technological inferiority in strategic airpower and nuclear weapons that inspired them to begin laying the foundations of what was later to become a space capability." (Military Mission in Space, p. 4)

During 1962: According to a symposium of social and physical scientists at the Iowa Space Science Summer Study Program, "Underlying patterns of thought and belief are affected by the advent of the space age, and these changing beliefs, in turn, constitute part of the conditions in which future decisions in shaping the space program will be made... The opening of outer space to human exploration may constitute a major discontinuity in thought with consequent profound changes in outlook, customs, political and economic institutions, and in art, literature, and religion." (Review of Space Research, p. 16-9)

1963

During 1963: In a lecture to the Air War College, Dr. Eugene M. Emme, NASA Historian, said:

"Sputnik in October 1957, at once demolished man's traditional concept of the universe and did so in wholesale fashion. Men everywhere now looked at space with practical eyes, for technology had opened the way to extraterrestrial realities. The world was never to appear the same again.... But for the vast majority of mankind right down until Sputnik in 1957, the domain of space above the earth was merely a backdrop for the vast mysterious nature of the universe. It was a domain largely left to astronomers and clergymen until the rise of aviation technology carried men into the air space medium of birds and insects. After Sputnik, not only airmen, astronomers, geophysicists and missilemen began looking at space with discerning minds. Sputnik opened the door for understanding the totality of nature in a manner which had happened only once before--the global wonderment and concern raised by the demonstration of nuclear fission over Hiroshima in August 1945." ("The NASA Space Program" by Dr. Eugene M. Emme, 2/1/63)

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